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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Rose *et al.*

Confirmation No.: 3581

Serial No.: 10/032,157

Group Art Unit: 2812

Filed: December 21, 2001

Examiner: Not yet assigned

For: PHASE SHIFT DEVICE IN
SUPERCONDUCTOR LOGIC

Attorney Docket No.: 11090-045-999

DECLARATION OF GARY S. WILLIAMS UNDER 37 CFR § 1.47

Box Missing Parts
Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

I, GARY S. WILLIAMS, declare that:

1. I am the attorney representing the interests of D-Wave Systems, Inc., assignee in this matter.

2. Upon information and belief, the subject matter of the present invention was conceived and developed by Geordie Rose, Mohammad H. S. Amin, Timothy Lee Duty, Alexandre Zagoskin, Alexander N. Omelyanchouk and Jeremy P. Hilton. Geordie Rose, Mohammad H. S. Amin, Alexandre Zagoskin, Alexander N. Omelyanchouk and Jeremy P. Hilton have signed a declaration for the application and an assignment to D-Wave Systems, Inc. Timothy Lee Duty refuses to sign the declaration for the application. Furthermore, Timothy Lee Duty refuses to sign an assignment to D-Wave Systems, Inc.

3. Timothy Lee Duty is obligated, by his employment agreement with D-Wave Systems, Inc. to assign his entire interest in the subject matter of the present invention to D-Wave Systems, Inc. A copy of Mr. Duty's employment agreement with D-Wave Systems, Inc., which he signed, is enclosed herewith as Exhibit "A". Sections 5 (b) and 5 (c) of the attached employment agreement specify Mr. Duty's obligation to assign inventions to D-Wave Systems, Inc., and, at D-Wave System, Inc.'s request, execute any documents to protect inventions created while employed, such as a declaration.

4. After being reviewed by the inventors, a non-provisional Patent application was filed on December 21, 2001 with an unsigned Declaration, was filed by D-Wave System's Inc. prior counsel, Skjerven, Morrill, MacPherson LLP. This application was based on a provisional application nos. 60/257,624 filed December 22, 2000 and 60/325,719 filed September 28, 2001, provisional applications which were filed by D-Wave Systems, Inc.'s prior counsel Skjerven, Morrill, MacPherson LLP.

5. On or about November 7, 2001, Timothy Lee Duty left the employ of D-Wave Systems, Inc.

6. This matter was transferred to us on or about August 8, 2002, from D-Wave Systems, Inc.'s prior counsel Skjerven, Morrill, MacPherson LLP.

7. From review of the file, on or about January 2, 2002, prior counsel for D-Wave Systems, Inc., the law firm of Skjerven, Morrill, MacPherson LLP, sent to D-Wave Systems, Inc., a copy of the application as filed along with an unsigned declaration and unsigned assignment for their acquisition of the inventors' signatures on these documents.

8. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. I further declare that all statements made by me are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that any willful false statements may jeopardize the validity of any patent resulting therefrom.

Respectfully submitted,

Date September 26, 2002



Gary S. Williams

31,066
(Reg. No.)

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E-mail: zagoskin@dwavesys.com

D-Wave Systems Inc.

July 16, 2001

To: Dr. Timothy Lee Duty
#802 1340 W. 12th Ave.
Vancouver, BC V6H 1M5
(604) 719-5185

Fichtestrasse 15
Erlangen, Germany
91054
049 9131 973 058
049 160 380 3760

Re: Employment Offer

This Agreement sets out the terms and conditions of your employment with D-Wave Systems Inc. (the "Company").

IN CONSIDERATION of the promises and mutual covenants set forth in this document, and of your employment, and in consideration of the payment of Ten Dollars (\$10.00) and other good and valuable consideration by the Company to you, the receipt and sufficiency of which you hereby acknowledge, we agree as follows:

1. Definitions: Unless otherwise specified, capitalized terms shall have the meaning as set out in Schedule "A".
2. Term: Your employment commenced as of January 1, 2000, (the "Commencement Date") and will continue until this Agreement is terminated as hereinafter provided.

3. Position and Duties:

- (a) **Position and Duties:** You will be employed by the Company in the position of staff scientist. You will perform or fulfil such duties and responsibilities as directed from time to time by the Company. The nature of the business of the Company requires that you be flexible. Accordingly, the Company may assign new or different duties to you or change your position at any time in its discretion.
- (b) **Scope:** During your employment, you will devote the whole of your full time, attention, and abilities to effective and competent performance of your duties, and you will give the Company the full benefit of your knowledge, expertise, technical skill and ingenuity.

4. Compensation:

- (a) **Salary:** You will receive an annual salary (the "Salary") in the amount of \$60,000, payable in equal installments on the 15th and last day of each month net of all required or permitted withholdings and remissions.

Your Salary will be reviewed annually, and may be adjusted by the Company in its discretion.
- (b) **Employee Stock Option Plan:** You will be entitled to participate in the Stock Option Plan (the "Plan") of the Company in accordance with the terms of the Plan as altered or amended by the Board from time to time.
- (c) **Vacation Entitlement:** You will be entitled to an annual paid vacation equal to four (4) weeks in each calendar year of employment pro-rated for any partial year, to be taken in accordance with the Company's vacation policy in effect from time to time. You must use your vacation each year. If you do not take your full vacation entitlement, in any year, the balance cannot be carried forward and applied in subsequent years.
- (d) **Medical Insurance and Other Benefits:** You will be eligible to participate in the benefit plans and programs of the Company. The Company will pay partial premium costs of the following benefits:

- Extended Health
- Dental
- Long-Term Disability
- Life Insurance

Your eligibility and entitlement to benefits will be determined by the terms and conditions of the insurance plans or programs purchased by the Company. The Company reserves the right to alter or delete part or all of any benefit or change benefit carriers at any time in its discretion.

5. Assignment of Interest in Innovations:

- (a) **Disclosure:** You will make prompt and full disclosure to the Company of any development, production, process, design, patent, patent application, trade secret, confidential technology, know-how or improvement relating to the Business of the Company conceived, made, improved upon, reduced to practise or participated in by you, solely or jointly, in the course of or relating to your employment with the Company or with any other member of the Group (the "Innovations").
- (b) **Assignment:** The Company will hold all Intellectual Property Rights in respect of the Innovations for the exclusive benefit of the Company and you will not claim or apply for registration or challenge the Company's registration of, any such Intellectual Property Rights. You absolutely, unconditionally and irrevocably assign, transfer and convey all past, present and future right, title, benefit and interest in and to all Intellectual Property Rights in respect of the Innovations. You waive in favour of the Company all claims of any nature whatsoever that you now or hereafter may have for infringement of any Intellectual Property Rights for the Innovations so assigned to the Company. To the extent that copyright may subsist in the Innovations, you waive all past, present and future moral rights you may have.
- (c) **Intellectual Property Protection:** The Innovations and all related Intellectual Property Rights will be the absolute and exclusive property of the Company. The Company may apply for patent, copyright or other intellectual property protection in the Company's name or, where such procedure is proper, in your name, anywhere in the world. You will, at the Company's request, execute all documents and do all such acts and things considered necessary by the Company to obtain, confirm or enforce any Intellectual Property Rights in respect of the Innovations. If the Company requires but is unable to secure your signature for any such purpose in a timely manner, you hereby irrevocably designate and appoint the Company and any duly authorized officer or agent of the Company as

your agent and attorney, to act for you and in your behalf and stead to execute any such documents and to do all other lawfully permitted acts to carry out the intent of this provision, with the same legal force and effect as if executed or done by you.

6. Fidelity and Confidentiality:

- (a) **Performance and Duty to the Company:** Throughout your employment you will well and faithfully serve the Company and use all reasonable endeavours to promote the interests of the Company. You will act honestly, in good faith and in the best interests of the Company. You will adhere to all applicable policies of the Company as may be amended from time to time by Company in its discretion.
- (b) **Business of the Company:** You will not, during your employment with the Company, engage in any business, enterprise or activity that is contrary to or detracts from the due performance of the Business of the Company.
- (c) **Confidentiality:** During your employment with the Company and thereafter, you will retain in the strictest confidence all Confidential Information developed, utilised or received by the Company and each other member of the Group or that you acquire, see or are informed of, as a direct or indirect consequence of your involvement with the Company in any capacity or that is revealed to you by the Company or is generated through negotiations or other activities of the parties in connection with your involvement, in any capacity, with the Business of the Company and will not disclose or permit the disclosure of Confidential Information in any manner other than in the course of your employment with and for the benefit of the Company or as required by law or a regulatory authority having jurisdiction. You will not use Confidential Information for your own personal benefit or permit it to be used for the benefit of any party other than the Company.
- (d) **Exceptions:** Any obligations specified in subsection 6(c) will not apply to:
 - (i) any information which is presently in the public domain; or
 - (ii) any information that subsequently becomes part of the public domain through no fault of your own.
- (e) **Customer Contacts:** During your employment you will communicate and channel to the Company all knowledge, business and customer contacts and any other information that could concern or be in any way beneficial to the Business

of the Company. Any such information communicated to the Company will be and remain the property of the Company.

- (f) **Prior Employers:** The Company is not employing you to obtain, and you will not disclose to the Company, any confidential information of any prior employer. You will not pursue any business opportunities of any prior employer that you are not entitled to pursue and you will otherwise comply with any obligations to any prior employer.
- (g) **Return of Company Property:** Upon termination of your employment, you will promptly return to the Company all Company property including all written information, tapes, discs or memory devices and copies thereof including, without limitation, all papers, drawings, notes, notebooks, correspondence, records, reports, lists, photographs, memoranda, manuals, specifications, designs, devices and documents, and any other material on any medium in your possession or control pertaining to the Business of the Company. You will also return any keys, pass cards, identification cards or other property belonging to the Company.

7. Restrictive Covenant

- (a) The parties acknowledge that the business of the Company is highly competitive and that in the course of your employment you will be privy to Confidential Information and other information concerning the business of the Company and that the business of the Company would be vulnerable to competition from you.
- (b) Accordingly, you will not during the term of your employment with the Company and for a one year period following the date that your employment with the Company ceases (regardless of who initiated the termination and whether the termination was with or without cause), either individually or in partnership, or in conjunction in any way with any other persons, whether as principal, agent, consultant, shareholder, guarantor, creditor, or in any other manner whatsoever:
 - (i) engage in, carry on or otherwise be concerned with or have any interest in, or advise, lend money to, guarantee the debts or obligations of, permit your name, or any part thereof, to be used or employed by any person, firm, association, syndicate or corporation engaged in or concerned with a business competitive with that of the Company in any province or state in which the Company carries on its business at the time of termination of your employment;
 - (ii) solicit, interfere with or endeavour to entice away from the Company, accept any business from or the patronage of or enter into the employment of or render any service to, sell to or contract or attempt to contract with,

any person, firm, or corporation who was, during term of your employment, a client, customer or supplier of the Company, or a prospective client, customer or supplier of the Company;

- (iii) offer employment to or endeavour to entice away from the Company or to employ any person who was employed by the Company on the date of the termination of your employment.
- (c) The parties agree that the foregoing provisions are reasonable and necessary in order to protect the interests of the Company.
- (d) You agree and acknowledge that this covenant is given for good and valuable consideration (receipt of which is hereby acknowledged) and that by reason of your unique knowledge of and association with the business of the Company, the scope of this covenant as to both time and area is reasonable and commensurate with the protection of the legitimate interests of the Company. Section 7 of this Agreement applies regardless of the reason for your cessation of employment from the Company, and is severable from the other provisions of this Agreement.
- (e) You acknowledge that the damages the Company may suffer for breach of Section 7(b) of this Agreement may be irreparable, and in any event would be difficult, if not impossible, to ascertain, and you agree that the Company will have the right to an injunction or other available equitable relief in any court of competent jurisdiction, enjoining any threatened or actual breach. The existence of a right to an injunction or other available equitable relief will not preclude the Company from pursuing any other rights and remedies at law or in equity which it may have, including the right to seek recovery of damages.
- (f) The parties agree that if a court of competent jurisdiction will limit, restrict or otherwise change the geographical area, the time period or the types of business referred to in this section, then the limited, restricted or changed geographical area, time period or types of business determined by such a court will, for the purposes of this Section 7, be deemed to be the original geographic area and/or time period and/or types of business referred to in such Sections as if they were the original geographic area, time period and business set out herein.

8. Resignation: At any time you can resign from employment with the Company by providing to the Company two (2) weeks' prior written notice of your resignation. The Company may elect, in its discretion, to not require that you attend at work for any portion of this two (2) week notice period in which case your Salary would continue for the balance of the notice period and your benefits would, at the option of the Company, cease effective your last day of work.

9. Termination:

- (a) **With Cause:** The Company may immediately terminate your employment if you exhibit conduct of any kind that would justify an employer in British Columbia discharging an employee for cause at common law.
- (b) **Without Cause:** At any time, the Company may terminate your employment without cause by providing you with only the minimum notice or payment in lieu of notice requirements, and no more, prescribed by the *Employment Standards Act* (British Columbia) or any successor legislation, as amended from time to time.
- (c) **Disability:** Subject to the *Human Rights Code* (British Columbia), the Company may terminate your employment immediately after delivery by the Company to you of a notice of termination of your employment if:
 - (i) you are unable to competently perform your duties hereunder for any 120 consecutive days or 180 non-consecutive days in any 12 month period by reason of illness or mental or physical disability or total or partial incapacity for any reason as certified by a duly qualified medical practitioner; or
 - (ii) you are unable to perform your duties hereunder for the foreseeable future by reason of total incapacity as certified by a duly qualified medical practitioner.

10. Irreparable Harm: You acknowledge and agree that a breach of any of the covenants of this Agreement by you cannot be adequately compensated for such damages by monetary award, and may cause irreparable harm to the Company. Accordingly, you agree that in addition to all of the remedies available to the Company at law or in equity, the Company will be entitled as a matter of right to apply for equitable relief (including without limitation, injunctive relief) to ensure your compliance with the provisions of this Agreement.

11. Assignment and Enurement: You may not assign this Agreement, any part of this Agreement or any of your rights under this Agreement without the prior written consent of the Company. The Company may assign this Agreement to any Affiliate or other entity at any time in its discretion. This Agreement enures to the benefit of and is binding upon Employee and the Company and the respective heirs, executors, administrators, successors and permitted assigns.

12. Severability: If any provision or portion of this Agreement is determined to be invalid or unenforceable for any reason, then that provision or portion will be severed from this Agreement. The rest of this Agreement will remain in full force and effect.

13. Entire Agreement: This Agreement contains the whole agreement between you and the Company with respect to your employment with the Company, and there are no

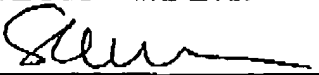
representations, warranties, collateral terms or conditions, express or implied, other than as set forth in this Agreement. This Agreement supersedes any written or oral agreement or understanding between you and the Company. No change or modification of this Agreement will be valid unless it is in writing and initialled by both parties.

- 14. Notice:** Any notice required or permitted to be given hereunder must be in writing and will be sufficiently given or made if delivered or sent by registered mail to the address of the parties set out on page 1 hereof. Any notice so given will be deemed to have been given and to have been received on the day of delivery if it is a business day and otherwise on the next succeeding business day or, if mailed, on the third business day following the mailing thereof (excluding each day during which there exists any interruption of postal services due to strike, lockout or other cause). Addresses for notice may be changed by giving notice in accordance with this section.
- 15. Non-waiver:** No failure or delay by you or the Company in exercising any power or right under this Agreement will operate as a waiver of such power or right. Any consent or waiver by you or by the Company to any breach or default under this Agreement will be effective only in the specific instance and for the specific purpose for which it was given.
- 16. Survival of Terms:** The provisions of Sections 1, and 5, subsections 6(c), (d) and (g) and Sections 7 to 19 of this Agreement will survive the termination of your employment and this Agreement.
- 17. Further Assistance:** The parties will execute and deliver any documents and perform any acts necessary to carry out the intent of this Agreement.
- 18. Time:** Time is of the essence of this Agreement.

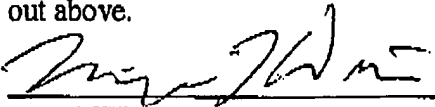
- 19. Governing Laws:** This Agreement will be construed in accordance with and governed by the laws of British Columbia and the laws of Canada applicable in British Columbia and the parties agree to conduct any litigation arising from this contract in the province of British Columbia.

THE PARTIES have executed this agreement as of the date written above.

D-WAVE SYSTEMS INC.

Per: 
for Alexandre Zagoskin
VP Research and Chief Scientist

I acknowledge and accept the terms and conditions of my employment with the Company as set out above.


TIMOTHY DUTY

Schedule "A"

Definitions are as follows:

"Affiliate" has the same meaning as in the British Columbia *Company Act* or any successor legislation, as amended from time to time.

"Board" means the board of directors of the Company.

"Business of the Company" means (i) any development of the Company's; (ii) development of clients of the Company's including marketing, sales, technical or other such processes; (iii) any business involved in the commercialisation of a quantum computer using superconducting devices; and (iv) any other material business carried on from time to time by the Company or any other member of the Group.

"Competitive Business" means any business or enterprise that competes with the Business of the Company.

"Confidential Information" means:

- (a) all confidential or proprietary facts, data, techniques, technical know-how, trade secrets, financial information and other information relating to the Business of the Company including, without limitation, products, concepts, processes, methods, designs, customer lists, supplier lists or industry contacts which may before or after the date of this Agreement be disclosed to you by the Company or by any other member of the Group or which may otherwise come within your knowledge or which may be developed by you in the course of your employment or from any other Confidential Information; and
- (b) confidential and proprietary information disclosed to the Company by third parties subject to restrictions on use or disclosure.

"Group" means the Company and its Affiliates.

"Intellectual Property Rights" means all rights in respect of intellectual property including, without limitation, all patent, industrial design, know-how, trade secret, privacy and trade-mark rights and copyright, to the extent those rights may subsist anywhere in the universe.

STOCK OPTION AGREEMENT

Dear Tim Duty:

Re: Stock Options

D-WAVE SYSTEMS INC. (the "Company") hereby offers you an option ("Option") to purchase Class B common shares in the capital of the Company pursuant to the Stock Option Plan established by the Company (the "Plan"), a copy of which is available for review at the office of the Company and will be provided to you upon request, subject to the terms and conditions set out below. All capitalized terms without separate definition have the meaning ascribed to them in the Plan.

Your option is subject to the terms and conditions of the Plan, which are deemed to be incorporated in this agreement, and is subject to the following specific provisions:

Date of Grant: January 1, 2001

Type of Option: Employee

Number of Shares: 43,000

Exercise Price: \$0.01 per option

Term of Option: 4 years

Exercise Period: From the Date of Grant until the Expiry Dates set out below

Expiry Date: per the Stock Option Plan

Vesting Periods: Your Options will vest as follows:

January 1, 2001	13,000
January 1, 2002	7,000
January 1, 2003	11,000
January 1, 2004	12,000

Your stock options may be exercised in whole or in part at any time during the Exercise Period by notice in writing to the Company specifying (a) your desire to exercise your Option to purchase shares and (b) the number of shares with respect to which you are exercising your Option. The notice must be accompanied by a cheque or bank draft in favour of the Company payable in Canadian funds in full payment of the Exercise Price for the number of shares then being purchased. The Company may also require you to sign a form in respect of the shares to be purchased.

Any shares issued to you as a result of the exercise of your Option will be issued under an exemption from the prospectus requirements of the British Columbia *Securities Act* and Regulation (the "Act"). The sale by you of those shares is subject to the resale rules of the Act and the articles of the

Company. If you are in doubt about the applicable requirements of the Act, you should seek independent legal advice.

The Company may give you notice (a "Sale Notice") of a proposed sale of shares of the Company which involves a change of control (meaning the right to exercise a majority of the votes which may be cast at a general meeting of the Company). The Sale Notice will include the price per share offered by the proposed purchaser and the other material terms and conditions of the proposed sale. Upon a Sale Notice being delivered to you, the Company may, at its option, require that you sell your shares to the proposed purchaser on the terms and conditions set forth in the Sale Notice, and you agree to do so and to execute and deliver to the Company or the proposed purchaser, or their designate, all documents reasonably required to transfer your shares.

If you would like to accept this Option on the terms and conditions noted, please sign in the space provided below.

D-WAVE SYSTEMS INC.

Per: _____

Alexandre Zagorskin

I, **Timothy Duty**,
hereby accept the above stock option
and agree to the terms and conditions
described above, including the terms
and conditions of the Plan, as of this ____
day of _____, 2001.

Timothy Duty

Witness: _____

Sarah Levine

(Please print name)